as the first and second ends of the one of the first heat exchanger portions, wherein one face of the one of the first heat exchanger portions is disposed adjacent one face of the one of the second heat exchanger portions, such that the ambient cooling air may flow in series through the one of the first heat exchanger portions and the one of the second heat exchanger portions,

the other of the second heat exchanger portions being disposed in overlapping relationship and adjacent to the other of the first heat exchanger portions with the first and second ends of the other of the second heat exchanger portions being oriented in the same direction as the first and second ends of the other of the first heat exchanger portions, wherein the other face of the other of the first heat exchanger portions is disposed adjacent one face of the other of the second heat exchanger portions, such that the ambient cooling air may flow in series through the other of the second heat exchanger portions and the other of the first heat exchanger portions,

the first heat exchanger portions being operatively connected such that the first fluid may flow between the second manifold of the one of the first heat exchanger portions and the first manifold of the other of the first heat exchanger portions, and

the second heat exchanger portions being operatively connected such that the second fluid may flow between the second manifold of the one of the second heat exchanger portions and the first manifold of the other of the second heat exchanger portions.

[c2]

2. The heat exchanger apparatus of claim 1 wherein the one of the first heat exchanger portions and the other of the second heat exchanger portions are disposed in substantially the same plane, and wherein the other of the first heat exchanger portions and the one of the second heat exchanger portions are disposed in substantially the same plane.

[c3]

3. The heat exchanger apparatus of claim 1 wherein the first heat exchanger portions are operatively connected such that the first fluid may flow between the second manifold of the one of the first heat exchanger portions and the first manifold of the other of the first heat exchanger portions adjacent at least one side of the first heat exchanger portions.

[c4]

4. The heat exchanger apparatus of claim 1 wherein the first heat exchanger portions are operatively connected such that the first fluid may flow between the second manifold of the one of the first heat exchanger portions and the first manifold of the

other of the first heat exchanger portions around at least one side of the second heat exchanger portions.

[c5]

5. The heat exchanger apparatus of claim 1 wherein the second heat exchanger portions are operatively connected such that the second fluid may flow therebetween through a conduit extending from and along the second manifold of the one of the second heat exchanger portions to and along the first manifold of the other of the second heat exchanger portions.

[c6]

6. The heat exchanger apparatus of claim 1 wherein the dimension between the first and second ends of the second heat exchanger portions is less than the dimension from one side of the second heat exchanger portions to the other side of the second heat exchanger portions, such that the fluid-carrying tubes extend across the shorter dimension of the faces of the second heat exchanger portions.

[c7]

7. The heat exchanger apparatus of claim 1 wherein the first heat exchanger portions include fluid-carrying tubes, the fluid-carrying tubes of each of the first heat exchanger portions extending in the same direction as the fluid-carrying tubes of each of the second heat exchanger portions.

[c8]

8. The heat exchanger apparatus of claim 1 wherein the sides of the first heat exchanger portions are aligned with the sides of the second heat exchanger portions, and wherein the first end of the one of the first heat exchanger portions is adjacent the first end of the one of the second heat exchanger portions and the second end of the other of the first heat exchanger portions is adjacent the second end of the other of the second heat exchanger portions.

[c9]

9. The heat exchanger apparatus of claim 1 wherein the second end of the one of the first heat exchanger portions is adjacent the first end of the other of the first heat exchanger portions, and wherein the second end of the one of the second heat exchanger portions is adjacent the first end of the other of the second heat exchanger portions.

[c10]

10. The heat exchanger apparatus of claim 1 wherein manifolds of the first and second heat exchanger portions extend horizontally, and the first and second heat exchanger portions are vertically separated.

[c11]

11. The heat exchanger apparatus of claim 1 wherein manifolds of the first and second heat exchanger portions extend vertically, and the first and second heat exchanger portions are horizontally separated.

[c12]

12. The heat exchanger apparatus of claim 1 wherein at least one of the sides or ends of one of the first heat exchanger portions extends outward of a side or end of one of the second heat exchanger portions.

[c13]

13. The heat exchanger apparatus of claim 1 wherein the first end of the one of the first heat exchanger portions extends outward of the first end of the one of the second heat exchanger portions.

[c14]

14. The heat exchanger apparatus of claim 1 wherein the first end of the one of the first heat exchanger portions extends outward of the first end of the one of the second heat exchanger portions and the second end of the other of the first heat exchanger portions extends outward of the second end of the other of the second heat exchanger portions.

[c15]

15. The heat exchanger apparatus of claim 1 wherein at least one of the sides or ends of one of the second heat exchanger portions extends outward of a side or end of the one of the first heat exchanger portions.

[c16]

16. A combined radiator and charge air cooler package comprising:

a radiator having upper and lower portions for cooling engine coolant, each radiator portion having opposite front and rear faces through which ambient cooling air flows, opposite upper and lower ends adjacent the faces, and sides adjacent the faces between the upper and lower ends;

a charge air cooler having upper and lower portions for cooling charge air, each charge air cooler portion having opposite front and rear faces through which cooling air flows, opposite upper and lower ends adjacent the faces, and sides adjacent the faces between

the upper and lower ends, and including manifolds at the upper and lower ends and charge air-carrying tubes extending substantially directly therebetween,

the upper charge air cooler portion being disposed in overlapping relationship and adjacent to the upper radiator portion with the upper and lower ends of the upper charge air cooler portion being oriented in the same direction as the upper and lower ends of the upper radiator portion, wherein one face of the upper radiator portion is disposed adjacent one face of the upper charge air cooler portion, such that the ambient cooling air may flow in series through the upper radiator portion and the upper charge air cooler portion,

the lower charge air cooler portion being disposed in overlapping relationship and adjacent to the lower radiator portion with the upper and lower ends of the lower charge air cooler portion being oriented in the same direction as the upper and lower ends of the lower radiator portion, wherein the other face of the lower radiator portion is disposed adjacent one face of the lower charge air cooler portion, such that the ambient cooling air may flow in series through the lower charge air cooler portion and the lower radiator portion,

the radiator portions being operatively connected such that the engine coolant may flow between the lower manifold of the upper radiator portion and the upper manifold of the lower radiator portion, and

the charge air cooler portions being operatively connected such that the charge air may flow between the lower manifold of the upper charge air cooler portion and the upper manifold of the lower charge air cooler portion.

[c17]

17. A method for cooling fluids used in an engine of a motor vehicle, comprising:

providing a heat exchanger assembly comprising:

a first heat exchanger having two portions for cooling a first fluid, each first heat exchanger portion having opposite front and rear faces through which ambient cooling air flows, opposite first and second ends adjacent the faces, and sides adjacent the faces between the first and second ends;

a second heat exchanger having two portions for cooling a second fluid, each second heat exchanger portion having opposite front and rear faces through which air flows, opposite first and second ends adjacent the faces, and sides adjacent the faces between the first and second ends, and including manifolds at the first and second ends and fluid-carrying tubes extending substantially directly therebetween,

one of the second heat exchanger portions being disposed in overlapping relationship and adjacent to one of the first heat exchanger portions with the first and second ends of the one of the second heat exchanger portions being oriented in the same direction as the first and second ends of the one of the first heat exchanger portions, wherein one face of the one of the first heat exchanger portions is disposed adjacent one face of the one of the second heat exchanger portions,

the other of the second heat exchanger portions being disposed in overlapping relationship and adjacent to the other of the first heat exchanger portions with the first and second ends of the other of the second heat exchanger portions being oriented in the same direction as the first and second ends of the other of the first heat exchanger portions, wherein the other face of the other of the first heat exchanger portions is disposed adjacent one face of the other of the second heat exchanger portions,

the first heat exchanger portions being operatively connected such that the first fluid may flow between the second manifold of the one of the first heat exchanger portions and the first manifold of the other of the first heat exchanger portions, and

the second heat exchanger portions being operatively connected such that the second fluid may flow between the second manifold of the one of the second heat exchanger portions and the first manifold of the other of the second heat exchanger portions;

flowing the first fluid through the first heat exchanger portions;

flowing the second fluid through the substantially directly extending tubes of the second heat exchanger portions and between the second manifold of the one of the second heat exchanger portions and the first manifold of the other of the second heat exchanger portions; and

flowing cooling air through the heat exchanger assembly such that ambient cooling air flows in series through the one of the first heat exchanger portions and the one of the second heat exchanger portions, and ambient cooling air flows in series through the other of the second heat exchanger portions and the other of the first heat exchanger portions.

[c18]

18. The method of claim 17 wherein the second fluid flows in sequence through the second manifold of the other of the second heat exchanger portions, the substantially directly extending tubes of the other of the second heat exchanger portions, the first manifold of the other of the second heat exchanger portions, the second manifold of the one of the second heat exchanger portions, the substantially directly extending tubes of

the one of the second heat exchanger portions, and the first manifold of the one of the second heat exchanger portions.

[c19]

19. The method of claim 17 wherein the second fluid flows in sequence through the first manifold of the one of the second heat exchanger portions, the substantially directly extending tubes of the one of the second heat exchanger portions, the second manifold of the one of the second heat exchanger portions, the first manifold of the other of the second heat exchanger portions, the substantially directly extending tubes of the other of the second heat exchanger portions, and the second manifold of the other of the second heat exchanger portions.

[c20]

20.The method of claim 17 wherein the first heat exchanger is a radiator and the first fluid is engine coolant, and wherein the second heat exchanger is a charge air cooler and the second fluid is charge air, each of the radiator and the charge air cooler portions being cooled by ambient air.

[c21]

21. A heat exchanger apparatus comprising:

a first heat exchanger having two portions for cooling a first fluid, each first heat exchanger portion having opposite front and rear faces through which ambient cooling air flows, a pair of manifolds, and fluid-carrying tubes extending substantially directly therebetween;

one of the first heat exchanger portions being disposed in a first plane, and the other of the first heat exchanger portions being disposed in a second plane, the first and second planes being substantially parallel,

a second heat exchanger having two portions for cooling a second fluid, each second heat exchanger portion having opposite front and rear faces through which air flows, a pair of manifolds, and fluid-carrying tubes extending substantially directly therebetween,

one of the second heat exchanger portions being disposed in the second plane in overlapping relationship and adjacent to the one of the first heat exchanger portions, wherein one face of the one of the first heat exchanger portions is disposed adjacent

one face of the one of the second heat exchanger portions, such that the ambient cooling air may flow in series through the one of the first heat exchanger portions and the one of the second heat exchanger portions,

the other of the second heat exchanger portions being disposed in the first plane in overlapping relationship and adjacent to the other of the first heat exchanger portions, wherein the other face of the other of the first heat exchanger portions is disposed adjacent one face of the other of the second heat exchanger portions, such that the ambient cooling air may flow in series through the other of the second heat exchanger portions and the other of the first heat exchanger portions,

the first heat exchanger portions being operatively connected such that the first fluid may flow between a manifold of the one of the first heat exchanger portions and a manifold of the other of the first heat exchanger portions, and

the second heat exchanger portions being operatively connected such that the second fluid may flow between a manifold of the one of the second heat exchanger portions and a manifold of the other of the second heat exchanger portions.

[c22]

22. The heat exchanger apparatus of claim 21 wherein the second heat exchanger portions are operatively connected such that the second fluid may flow therebetween through a conduit extending from and along the manifold of the one of the second heat exchanger portions to and along the manifold of the other of the second heat exchanger portions.

[c23]

23. The heat exchanger apparatus of claim 22 including at least one stiffening member within the conduit.

[c24]

24. The heat exchanger apparatus of claim 21 wherein the first heat exchanger portions are operatively connected such that the first fluid may flow between a manifold of the one of the first heat exchanger portions and a manifold of the other of the first heat exchanger portions adjacent at least one side of the first heat exchanger portions.

[c25]

25. The heat exchanger apparatus of claim 21 wherein the first heat exchanger portions are operatively connected such that the first fluid may flow between a manifold of the one of the first heat exchanger portions and a manifold of the other of the first heat exchanger portions around at least one side of the second heat exchanger portions.

[c26]

26. A method for cooling fluids used in an engine of a motor vehicle, comprising:

providing a heat exchanger assembly comprising:

a first heat exchanger having two portions for cooling a first fluid, each first heat exchanger portion having opposite front and rear faces through which ambient cooling air flows, a pair of manifolds, and fluid-carrying tubes extending substantially directly therebetween;

one of the first heat exchanger portions being disposed in a first plane, and the other of the first heat exchanger portions a being disposed in a second plane, the first and second planes being substantially parallel,

a second heat exchanger having two portions for cooling a second fluid, each second heat exchanger portion having opposite front and rear faces through which air flows, a pair of manifolds, and fluid-carrying tubes extending substantially directly therebetween,

one of the second heat exchanger portions being disposed in the second plane in overlapping relationship and adjacent to the one of the first heat exchanger portions, wherein one face of the one of the first heat exchanger portions is disposed adjacent one face of the one of the second heat exchanger portions,

the other of the second heat exchanger portions being disposed in the first plane in overlapping relationship and adjacent to the other of the first heat exchanger portions, wherein the other face of the other of the first heat exchanger portions is disposed adjacent one face of the other of the second heat exchanger portions,

the first heat exchanger portions being operatively connected such that the first fluid may flow between a manifold of the one of the first heat exchanger portions and a manifold of the other of the first heat exchanger portions, and

the second heat exchanger portions being operatively connected such that the second fluid may flow between a manifold of the one of the second heat exchanger portions and a manifold of the other of the second heat exchanger portions;

flowing the first fluid sequentially through the one and the other of the first heat exchanger portions;

flowing the second fluid sequentially through the one and the other of the second heat exchanger portions; and